

What is claimed is:

1. An access management system managing access to
a smart card by a plurality of applications,
5 comprising:
an exclusion control unit allowing an
application exclusive access to a smart card, in
response to an exclusive access request for the
smart card from the application, when the smart
10 card has a logical channel not exclusively accessed
by another application; and
an access control unit permitting the
application allowed the exclusive access to access
the smart card, in response to an access request
15 for the smart card from the application, when the
application has already been authenticated for the
smart card.
2. The system according to claim 1, wherein
20 said exclusion control unit queues an
application which issues an exclusive access
request in response to an exclusive access request
for the smart card from the application when the
smart card has no logical channel not exclusively
25 accessed by another application.

3. The system according to claim 1, wherein

said access control unit rejects the access
request from the application allowed the exclusive
5 access if the application has not been
authenticated for the smart card.

4. The system according to claim 1, wherein

said access control unit manages
10 authentication between an application and a smart
card using a process ID of the application.

5. The system according to claim 1, wherein

said access control unit changes an
15 application authenticated for a smart card into a
non-authenticated application when the smart card
is extracted from a smart card reader.

6. The system according to claim 1, wherein

20 when said application accesses the smart card
plural times, said application issues the exclusive
access request to said exclusion control unit each
time the access is started, and issues an exclusive
access cancellation notification to said exclusion
25 control unit each time the access terminates.

7. The system according to claim 6, wherein

5 said exclusion control unit queues an application which issues an exclusive access request for a smart card if the smart card has already been exclusively accessed by another application, and allows the queued application
10 exclusive access upon receipt of the exclusive access cancellation notification from the application which has exclusively accessed the smart card.

8. The system according to claim 1, wherein

15 said access control unit request a smart card to cancel authentication of an application, in response to a smart card authentication cancellation notification from the application, when the application is the last application authenticated for the smart card.

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9. An access management system managing access to a smart card by a plurality of applications, comprising:

25 exclusion control means for allowing an application exclusive access to a smart card, in

response to an exclusive access request for the smart card from the application, when the smart card has a logical channel not exclusively accessed by another application; and

5 access control means for permitting the application allowed the exclusive access to access the smart card, in response to an access request for the smart card from the application, when the application has already been authenticated for the
10 smart card.

10. A method for sharing a smart card and managing access to the smart card by a plurality of applications, comprising:

15 allowing an application exclusive access to a smart card, in response to an exclusive access request for the smart card from the application, when the smart card has a logical channel not exclusively accessed by another application; and
20 permitting the application allowed the exclusive access to access the smart card, in response to an access request for the smart card from the application allowed the exclusive access, when the application allowed the exclusive access
25 has already been authenticated for the smart card.

11. An application including a plurality of accessing processes to one smart card, wherein:

5 an exclusive access request is issued for each accessing process each time the accessing process is started, and an exclusive access cancellation notification is issued each time each accessing process terminates; and

10 an authentication request is issued for a smart card to be accessed only in a first accessing process in said plurality of accessing processes.

12. A library of an application including a plurality of accessing processes to one smart card, wherein:

15 an exclusive access request is issued for each accessing process each time the accessing process is started, and an exclusive access cancellation notification is issued each time each accessing process terminates; and

20 an authentication request is issued for a smart card to be accessed only in a first accessing process in said plurality of accessing processes.

25 13. A storage medium readable by an information

processing device, in which a plurality of applications are operated in parallel, storing a program used to direct the information processing device to perform the processes of:

5 allowing an application exclusive access to a smart card, in response to an exclusive access request for the smart card from the application, when the smart card has a logical channel not exclusively accessed by another application; and

10 permitting the application allowed the exclusive access to access the smart card, in response to an access request for the smart card from the application, when the application has already been authenticated for the smart card.

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